

1550nm Erbium Doped Fiber
Amplifier · HA5100 Series

USER MANUAL

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1.0 PRODUCT SUMMARY

1.1 Product summarize

EDFA is the great achievement of opto-electronics and information field in recent decades internationally, its appearance leads to the revolution of optic-communication, brings revolutionary progress for CATV transmission with high quality, long distance, large area, reducing instruction cost for network substantially.

HA5100 amplifier, adopting mature 1550nm module technology of international famous company. Core component are all originally imported from America, which ensures high quality and high reliability of the products.

2.0 AMPLIFIER CONTROLS, INDICATORS, AND ALARMS

This section of the manual will give an overview of the available menus in the HA5100 series amplifier and their descriptions. All instructions in Section 2.0 refer to the representation of the front panel shown in the diagram below. The user scrolls through the menus using the push bottoms found on the front panel, these are located just to the right of the LCD screen.



2.1 The operation of the panel

2.1.1 Open menu

- A. Plug in 110V city power supply
- B. Turn on power switch in the rear panel

Front panel shows "**KEY ON...**", Laser status lamp turns green from red, machine enters self-checking, after checking it enters working status, display "**Descriptor**".

2.1.2 Start-up main menu

Press ▲\▼ button will display below menu in sequence.

Menu # 1 - Descriptor

Read-only menu, tells the model of this equipment

Menu # 2 - OUTPUT

Read-only menu, tells the output optical power

Menu # 3 - INPUT

Read-only menu, tells the input optical power

Menu # 4 - PUMP BIAS

Read-only menu, tells the current of PUMP

Menu # 5 - PUMP TEMP

Read-only menu, tells the temperature of pump

Menu # 6 - PUMP COOLING

Read-only menu, tells the current of PUMP in cooling/heating situation

Menu # 7 - +5V Reads

Read-only menu, display the voltage +5V

Menu # 8 - -5V Reads

Read-only menu, display the voltage -5V

Menu # 9 - S/N

Read-only menu, tells the serial-number

Menu # 10 - IP

Adjustable list, display the IP address of SNMP

Menu # 11 - Sub

Adjustable list, display the address of net mask

Menu # 12 - GW

Adjustable list, display the gateway address of SNMP

Menu # 13 - TR1

Adjustable list, display the TRAP1 address of SNMP

Menu # 14 - TR2

Adjustable list, display the TRAP2 address of SNMP

2.1.3 Menu assistant manual

1. Input power (INPUT):
Input power > +10 dBm, display HIGHER;
Input power < -15 dBm, display LOWER.
2. Output (OUTPUT):
When input display HIGHER or LOWER, the output power displays NO OUTPUT.
3. Laser temperature (TEMP): °C, laser temp is set the range of 20°C~30°C, if exceed, red light will alarm and power supply of the laser will shut down automatically.
4. Bias (BIAS): Bias is the key index of the laser, if exceeding the fixed range power supply of the laser will be shut down automatically to protect the laser
5. +5Vvoltage(+5V READS) >±0.5V alarm.
-5Vvoltage(-5V READS) >±0.5V alarm.
6. Press ▲▼ key to amend the IP address menu that should be amended, press ▲▼ at the same time to enter the menu, press ▼

to choose the amend place, push ▲ to amend, press ▲▼ to enter into save and exit.

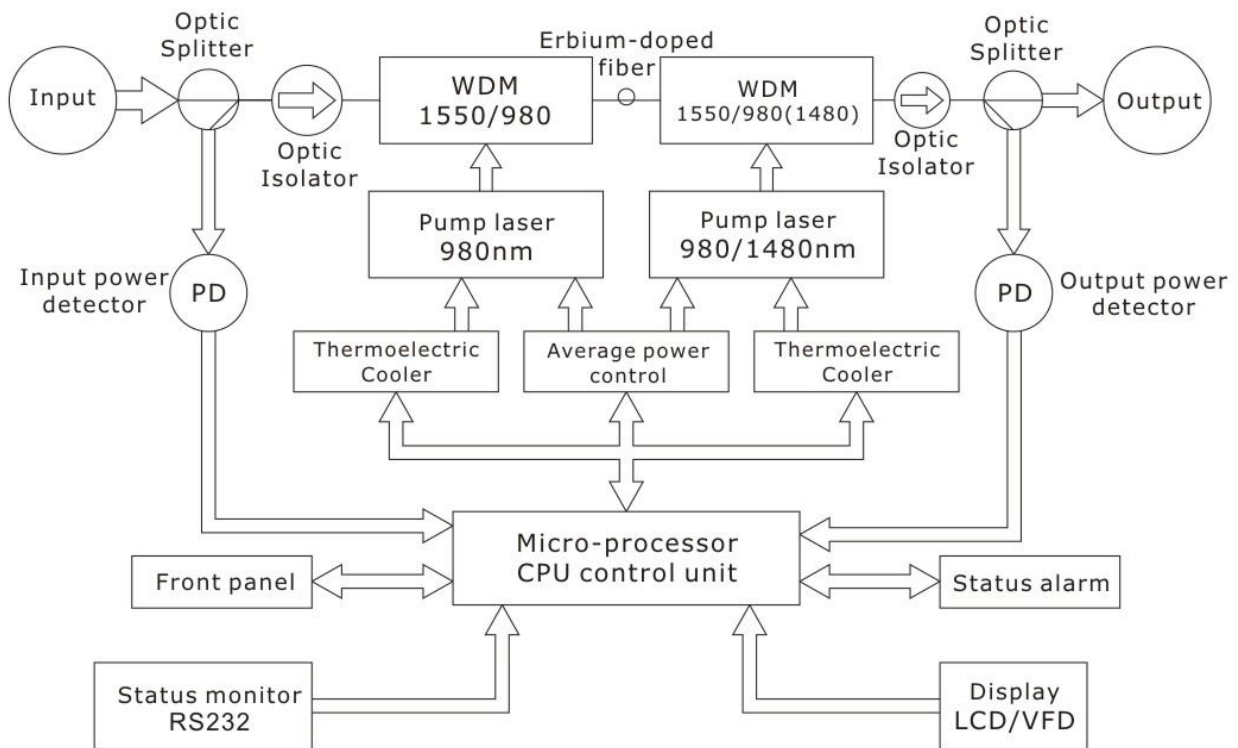
For example, amend IP setup menu, IP: 192.168.000.015; if change 5 to 6, use ▲▼ to enter the IP menu, then press ▼ to

choose the place of 5, press ▲ key to change 5 to 6, then press ▲

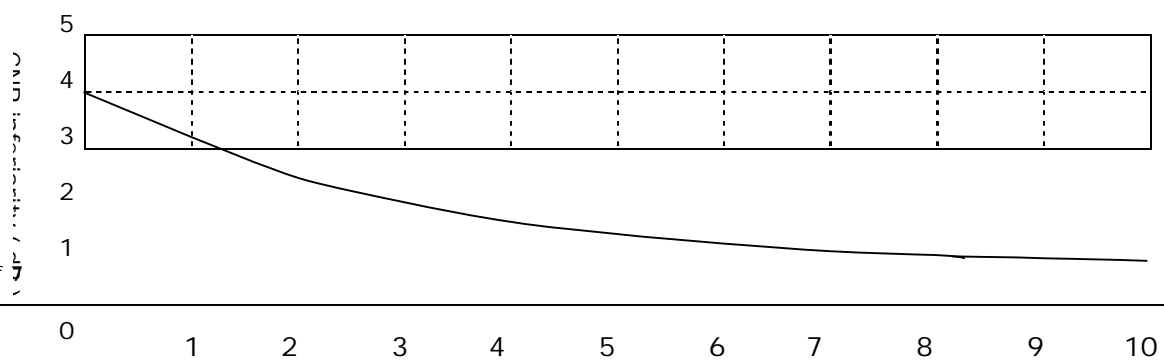
▼ to save amended IP:192.168.000.016

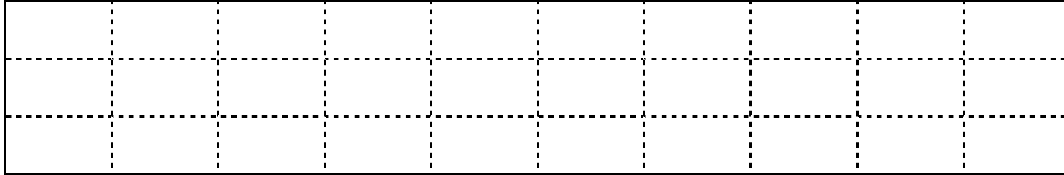
3.0 EQUIPMENT OPERATION PRINCIPLE

3.1 HA5100 Series amplifier circuit principle



3.2 C/R inferiority rate





4.0 DESCRIPTION OF STATUS ALARM

Working status indication (LED), which is near the powers supply switch in the front panel. When it is green, it is working properly; Red indicates the laser does not work. Red sparking is alarm.

- A. With 110V power supply, if machine is good, digital panel will display "KEY OFF", there is Red light
- B. Turn on with the key, display "KEY OFF" for seconds, laser is also on, indication light turns into Green from Red.
- C. Press ▲▼ bottom, can display parameters .
- D. If any fault listed above occurred, there will be alarm (Red sharking), Micro-processor will cut down the laser automatically, and digital panel show the cause of the fault.
- E. In order to protect the laser, there is time-delay function, after turning on with the key, the laser will start to work after 10 seconds.

5.0 OPERATION NOTICE

- 1. The machine should have good grounding, grounding resistance $< 4\Omega$. According to the international standard, 110V plug in adopts tri-wire rule, the middle wire is the grounding wire.
- 2. The machine adopts high performance, high reliability, steady voltage switch power supply, it has constant voltage overflow protection. It can work in 110~254 VAC electric network. The micro-processor are monitoring the output DC voltage. If the Fuse is melted broken, it shows the machine's inner parts has occurred problems.
- 3. In order to make sure reflect loss $\geq 45\text{dB}$, we use SC/APC connector; other type (such as FC/PC) cannot match with it. Keep the connector clean when installing. Clean it with degreased cotton with anhydrous alcohol after several plug-in/out.
- 4. Working in 1550nm wavelength, largest output power $\leq 500\text{mW}$. Do not turn on the machine separately or without protection cover. Otherwise the laser will do harm to human body especially eyes.

6.0 GUARANTEE AND REPAIR ITEMS

1. Each unit is packaged with<Products Qualification>, with the series number provide one-year's guarantee.
2. Micro-processor software, with the function of monitoring laser status, digital display, trouble alarm, network management etc. pump laser will not be damaged only by man-induced factor. In case of Red lamp sparking (Alarm). Please return for repairing. User should not open the top cover for repair, otherwise, even within guarantee period, maintain and material fee will be charged.
3. Lifelong maintain and upgrade is provided even guarantee period is expired.
4. If component is damaged by man-induced factor, material fee will be charged.

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